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History of seizure disorder other than early febrile convulsions.

Malignancies (active) unless treated and without recurrence for 5 yrs.

Chronic inability to equalize sinus and/or middle ear pressure.

Cystic or cavitary disease of the lungs.

Impaired organ function caused by alcohol or drug use.

Conditions requiring continuous medication for control (e.g., antihistamines, steroids, barbiturates, moodaltering drugs, or insulin).

Meniere's disease.

Hemoglobinopathies.

Obstructive or restrictive lung disease.

Vestibular end organ destruction.

Pneumothorax.

Cardiac abnormalities (e.g., pathological heart block, valvular disease, intraventricular conduction defects other than isolated right bundle branch block, angina pectoris, arrhythmia, coronary artery disease).

Juxta-articular osteonecrosis.

APPENDIX B TO SUBPART T TO PART 1910—GUIDELINES FOR SCIENTIFIC DIVING

This appendix contains guidelines that will be used in conjunction with §1910.401(a)(2)(iv) to determine those scientific diving programs which are exempt from the requirements for commercial diving. The guidelines are as follows:

- 1. The Diving Control Board consists of a majority of active scientific divers and has autonomous and absolute authority over the scientific diving program's operations.
- 2. The purpose of the project using scientific diving is the advancement of science; therefore, information and data resulting from the project are non-proprietary.
- 3. The tasks of a scientific diver are those of an observer and data gatherer. Construction and trouble-shooting tasks traditionally associated with commercial diving are not included within scientific diving.
- 4. Scientific divers, based on the nature of their activities, must use scientific expertise in studying the underwater environment and, therefore, are scientists or scientists in training.

[50 FR 1050, Jan. 9, 1985]

APPENDIX C TO SUBPART T TO PART 1910—ALTERNATIVE CONDITIONS UNDER §1910.401(a)(3) FOR RECREATIONAL DIVING INSTRUCTORS AND DIVING GUIDES (MANDATORY)

Paragraph (a)(3) of \$1910.401 specifies that an employer of recreational diving instructors and diving guides (hereafter, "divers" or "employees") who complies with all of the conditions of this appendix need not provide a decompression chamber for these divers as required under 910.423(b)(2) or 910.426(b)(1).

1. EQUIPMENT REQUIREMENTS FOR REBREATHERS

- (a) The employer must ensure that each employee operates the rebreather (i.e., semi-closed-circuit and closed-circuit self-contained underwater breathing apparatuses (hereafter, "SCUBAS")) according to the rebreather manufacturer's instructions.
- (b) The employer must ensure that each rebreather has a counterlung that supplies a sufficient volume of breathing gas to their divers to sustain the divers' respiration rates, and contains a baffle system and/or other moisture separating system that keeps moisture from entering the scrubber.
- (c) The employer must place a moisture trap in the breathing loop of the rebreather, and ensure that:
- (i) The rebreather manufacturer approves both the moisture trap and its location in the breathing loop; and
- (ii) Each employee uses the moisture trap according to the rebreather manufacturer's instructions.
- (d) The employer must ensure that each rebreather has a continuously functioning moisture sensor, and that:
- (i) The moisture sensor connects to a visual (e.g., digital, graphic, analog) or auditory (e.g., voice, pure tone) alarm that is readily detectable by the diver under the diving conditions in which the diver operates, and warns the diver of moisture in the breathing loop in sufficient time to terminate the dive and return safely to the surface; and
- (ii) Each diver uses the moisture sensor according to the rebreather manufacturer's instructions.
- (e) The employer must ensure that each rebreather contains a continuously functioning CO_2 sensor in the breathing loop, and that:
- (i) The rebreather manufacturer approves the location of the CO₂ sensor in the breathing loop;
- (ii) The CO₂ sensor is integrated with an alarm that operates in a visual (e.g., digital, graphic, analog) or auditory (e.g., voice, pure tone) mode that is readily detectable by each diver under the diving conditions in which the diver operates; and
- (iii) The CO₂ alarm remains continuously activated when the inhaled CO₂ level reaches and exceeds 0.005 atmospheres absolute (ATA).
- (f) Before each day's diving operations, and more often when necessary, the employer must calibrate the $\rm CO_2$ sensor according to the sensor manufacturer's instructions, and ensure that:
- (i) The equipment and procedures used to perform this calibration are accurate to